

Abstract of the Disclosure

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A hybrid assembly having improved cross talk characteristics comprises an electromagnetic band gap (EBG) layer on a substrate having an upper surface and a lower surface and a semiconductor structure (MMIC) mounted above the EBG layer. A plurality of stars made of an EBG material are preferably printed, or deposited, on the upper surface. The EBG material has slow wave characteristics. The plurality of stars tessellates the upper surface between conductive paths. Each of the stars has a center section formed from a regular polygon, the center section having projections extending from the center section. The projections and the center section form a periphery. The periphery engages adjacent stars along the periphery. Stars are separated from adjacent stars by an interspace. Each of the stars is connected to a conductive via, in turn connected to ground potential. A conductive layer at ground potential is electrically continuous with vias used to interconnect all stars forming the EBG layer.